

Appendix V



Examples of Potentially Incompatible Waste

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of transfer, treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator shall, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., a strong acid mixed with a strong base), or that controls substances produced (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequence as noted.

Group 1-A	Group 1-B
Acetylene sludge	Acid sludge
Alkaline caustic liquids	Acid and water
Alkaline cleaner	Battery acid
Alkaline corrosive liquids	Chemical cleaners
Alkaline corrosive battery fluid	Electrolyte, acid
Caustic wastewater or solvent	Etching acid liquid
Lime sludge and other corrosive alkalines	Pickling liquor and other corrosive acids
Lime wastewater	Spent acid
Lime and water	Spent mixed acid
Spent caustic	Spent sulfuric acid

Potential consequences: Heat generation; violent reaction.

Group 2-A	Group 2-B
Aluminum	Any waste in Group 1-A or 1-B
Beryllium	
Calcium	
Lithium	
Magnesium	
Potassium	
Sodium	
Zinc powder	
Other reactive metals and metal hydrides	

Potential consequences: Fire or explosion; generation of flammable hydrogen gas.

Group 3-A	Group 3-B
Alcohols	Any concentrated waste in Groups 1-A or 1-B
Water	Calcium
	Lithium
	Potassium
	PCl ₃ , CH ₃ SiCl ₃
	Metal hydrides
	SO ₂ Cl ₂ , SOCl ₂ , Other water-reactive waste
Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.	
Group 4-A	Group 4-B
Alcohols	Concentrated Group 1-A or 1-B wastes
Aldehydes	Group 2-A wastes
Halogenated hydrocarbons	
Nitrated hydrocarbons	
Unsaturated hydrocarbons	
Other reactive organic compounds and solvents	
Potential consequences: Fire, explosion, or violent reaction.	
Group 5-A	Group 5-B
Spent cyanide and sulfide solutions	Group 1-B wastes
Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.	
Group 6-A	Group 6-B
Chlorates	Acetic acid and
Group 6-A	Group 6-B
Chlorine	other organic
Chlorites	acids
Chromic acid	Concentrated
Hyphochlorites	mineral acids
Nitrates	Group 2-A wastes
Nitric acid, fuming	Group 4-A wastes
Perchlorates	Other flammable and
Permanganates	combustible wastes
Peroxides	
Other strong oxidizers	

Potential consequences: Fire, explosion, or violent reaction.

Source: "Law, Regulations, and Guidelines for Handling of Hazardous Waste." California Department of Health, February 1975.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 208, 25159 and 25159.5, Health and Safety Code; 40 CFR Part 265, Appendix V.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).